TMDL Issues, Challenges, and Solutions

TMDL Workshop
Abingdon, Va.
September 28, 2006

TMDL Partners

- DMLR – TMDLs & Implementation
- DCR – Implementation
- DEQ – TMDLs, Implementation, SWCB adoption & approvals, and EPA submittals
- TMDL Ad Hoc Group – forum to discuss issues of statewide importance
- EPA – TMDL approvals

Overview of TMDL Issues

- Throughout TMDL development process, many technical and legal issues have emerged
- Many issues have been resolved, but some remain & new ones emerge
- TMDL process impacts all water quality programs, especially permits & WQSs

What are Our Challenges?

- Meet the ambitious schedule contained in EPA's Consent Decree
- Restoration of 9,000^{+} stream miles and Chesapeake Bay
- Accomplish this with existing tools and limited budget
- Implement the cost effective and reasonable remediation activities

Emerging Challenges

- 2006 Legislation
  - VA Impaired Waters Cleanup Plan – HB1150
  - Procedure for Conducting Use Attainability Analysis – HB 1457
- Triennial Review – develop numeric criteria for total dissolved solids (TDS)

HB 1150 – Chesapeake Bay and Virginia Waters Clean-up and Oversight Act

- Secretary of Natural Resources to develop a strategic plan by January 1, 2007 for cleanup of Virginia impaired waters.
- The plan is to include:
  - Measurable, attainable objectives
  - Strategies and time frames
  - Funding and disbursement plans
  - Problem areas and risk mitigation strategies
  - Coordination between local and state governments
  - Assessments of alternative funding mechanisms
  - Recommendations for legislative action
- Plan to be revised and updated as needed
- Semi-annual progress reports to General Assembly committees
- Meetings of committees to hear testimony or discuss specific initiatives requiring legislative action

HB 1457 – Procedure for Conducting a Use Attainability Analysis

- § 62.1-44.19:7. Plans to address impaired waters.
  1. *E. If an aggrieved party presents to the Board reasonable grounds indicating that the attainment of the designated use for a water is not feasible,*
  2. *then the Board, after public notice and at least 30 days provided for public comment,*
  3. *may allow the aggrieved party to conduct a use attainability analysis according to criteria established pursuant to the Clean Water Act and a schedule established by the Board.*
  4. *If applicable, the schedule shall also address whether TMDL development or implementation for the water should be delayed.*

UAA Process?

- Somewhat analogous to the petition process
- What constitutes “reasonable grounds” that attaining use is not feasible?
- EPA’s 40 CFR 131.10(b) & Virginia’s WQS 9 VAC 25-260-10 include criteria for doing a UAA and for removing a use or establishing subcategories of a use
- VA has little experience with UAA process
- Agency has received a draft submittal from VA Coalfields TMDL Group for conducting a UAA on Straight Creek in Lee County

Applicable Regulations

- EPA's 40 CFR 131.10(b) and Virginia's equivalent 9 VAC 25-260-10.I states:
  - that no use change is appropriate
    - if the use can be attained through implementing effluent limits under §§ 301b and 306 of the Clean Water Act
    - and by implementing ***cost-effective*** and ***reasonable*** best management practices for non-point source control

DEQ and DMLR Staff View

- DEQ and DMLR staff believe that subsection I of Virginia's WQS 9 VAC 25-260-10.I emphasizes the need to move forward with the Straight Creek TMDL implementation effort
  - if use can be attained by implementing ***cost-effective*** and ***reasonable*** best management practices for non-point source control
    - the Straight Creek TMDL recommends implementation by BMPs, not numeric effluent limits

Other Staff Thoughts

- The UAA process is useful tool:
  - at the beginning of the TMDL process when it is apparent that use (criteria) is not appropriate
  - or after all ***cost-effective*** and ***reasonable*** best management practices have been implemented
    - and we are still short of use attainment
- EPA must approve any use change

Biological TMDLs

- Many pollutants identified in the TMDL process do not have promulgated numeric limits
- Therefore, we rely on the narrative General Standard (9 VAC 25-260-20) which states in part: "*All state waters shall be free from **substances**...which are harmful to human, animal, plant, or **aquatic life***."

TDS as Stressor

- TDS or specific conductivity identified as stressor in 6 EPA approved and SWCB adopted TMDLs
- No promulgated TDS criteria
- Use reference watershed approach to determine set TDS end point
- Have included development of TDS numeric criteria for consideration in current triennial review

TDS Criteria

- Recently meet with members of Academic Advisory Committee and EPA
  - discussed various options for criteria development
    - by watershed, ecoregion, or combination
- Empirical approach most practical

An Emerging Issue – PCB TMDLs

- Currently developing 3 PCB TMDLs
  - others scheduled to start this year
    - Levisa Fork
- Delaware Bay PCB TMDL is EPA's prototype
  - no numeric WQBELs for point sources
  - contained point source low detection level PCB monitoring requirements
- Absence of low level data state wide

PCB Monitoring Guidance

- Agencies currently developing guidance for PCB point source monitoring
  - method and frequency
  - ensure representative and comparable data
- Adopting sampling and analytical procedures similar to those developed by Delaware River Basin Commission
  - working with EPA

Enable data based development of PCB loading for point sources

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